K. Install Oil-water separator, Manual control air valve and Power unit (See Fig. 28).

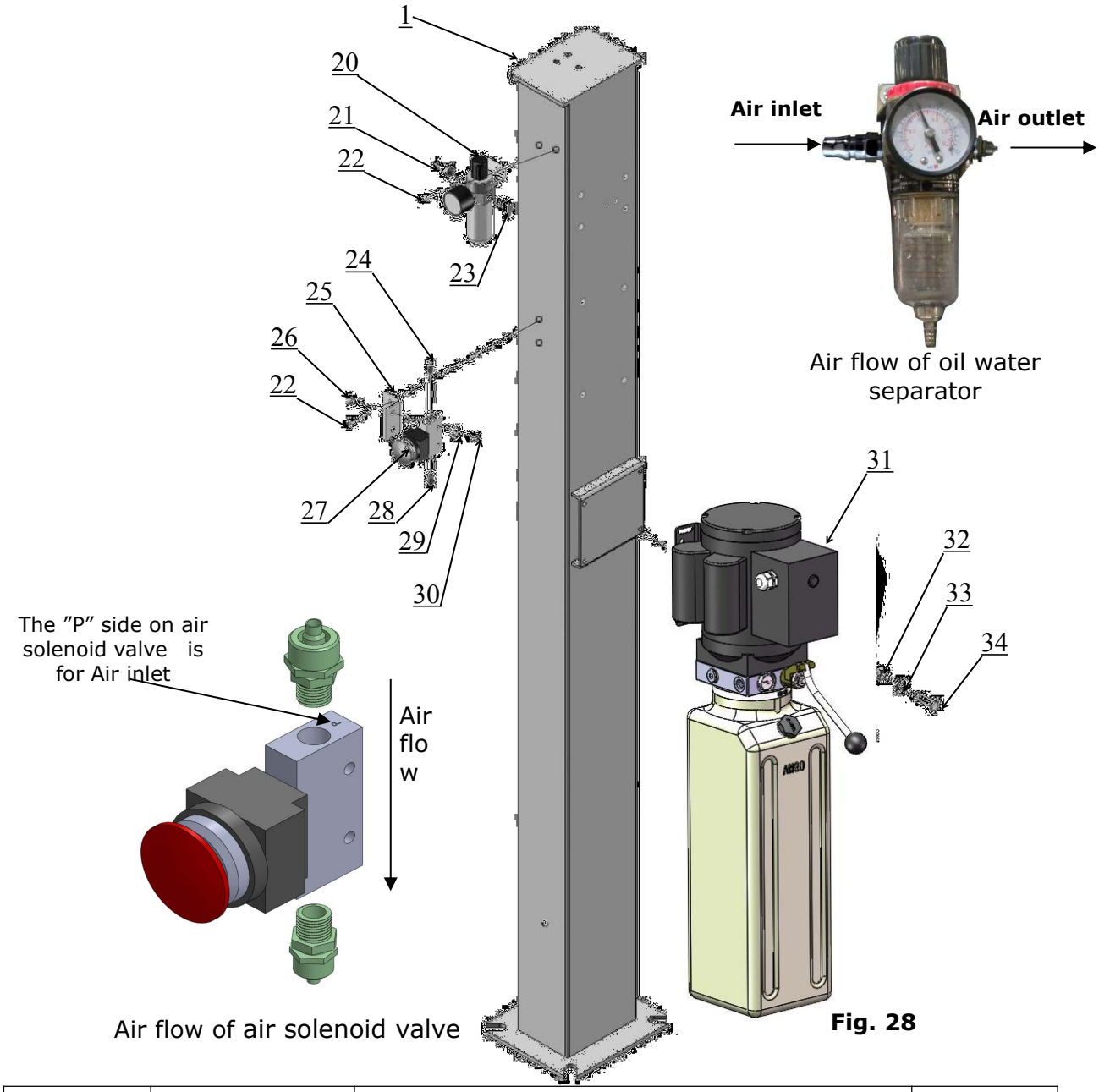


Fig. 28

Item	Part#	Description	QTY
20	10420145	Oil-water separator AFR-2000	1
21	10420146	Straight Fitting for air line	1
22	10209009	Cap Head Bolt M6*8	8
23	10420076	Fitting 6*8 screw thread	1
24	10420159	Straight Fitting 6*8 screw thread	1
25	11420160	Fixing plate of Manual Control Valve	1
26	10420161	Self locking nut M4	2
27	10420162	Manual Control Air Valve	1
28	10420163	Straight Fitting for Air Line 6*4 screw thread	1
29	10420148	Washer φ4	4
30	10420164	Cap Head Bolt M4*30	2
31	071102	Manual power unit	1
32	10209005	Self locking nut M8	14
33	10209004	Rubber Ring φ8*20*3	4
34	10209003	Hex Bolt M8*25	4

L. Install Hydraulic System (See Fig. 29).

Note: Oil hoses connected to oil cylinder must be passed above the cable, cylinder inlet port must swing upward to avoid the oil hose and oil return pipe scratched by cable.

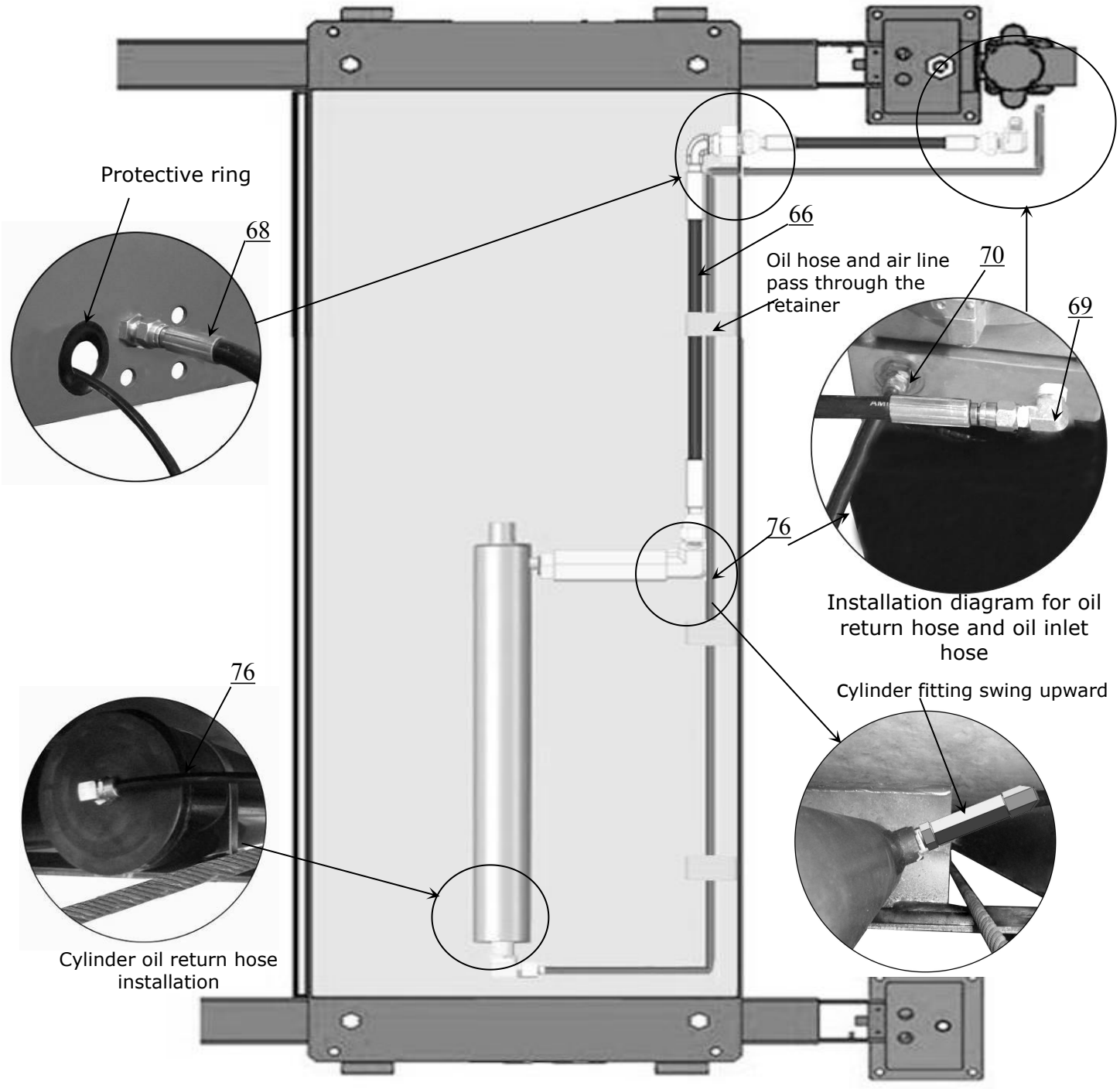


Fig.29

M. Install air-line system

1. Connecting front and rear Cross Beam cylinders by using 6*4 black air line. (the actual length of air line can be cut by user) **(See Fig.30)**

2. Cut the 6*4 black air line by scissor between two retainer, then connect the air line with T fitting. **(See Fig. 31).**

3. Connecting the solenoid valve using 6*4 black air line (the actual length of air line can be cut by user) **(See Fig. 32)**.

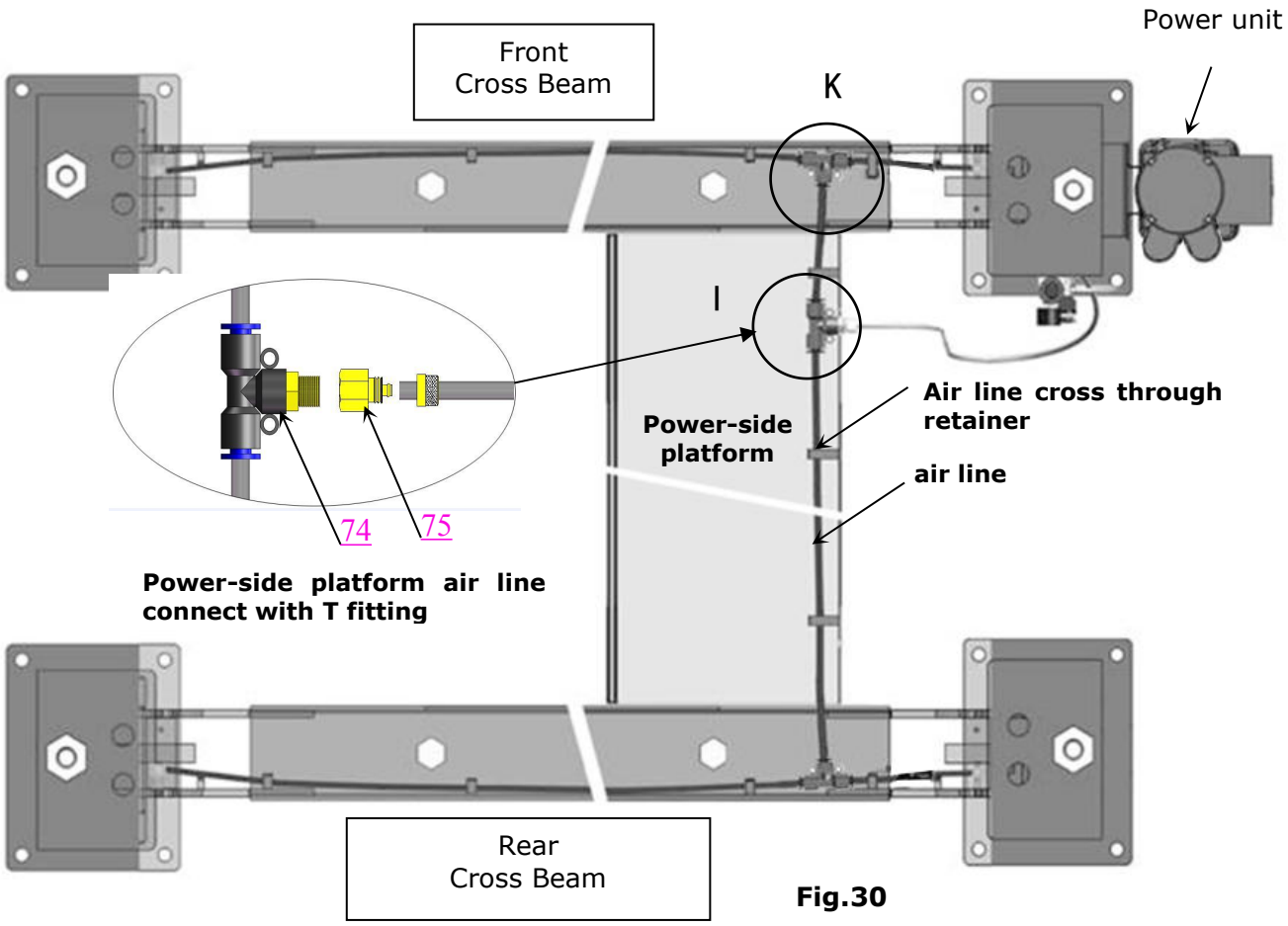
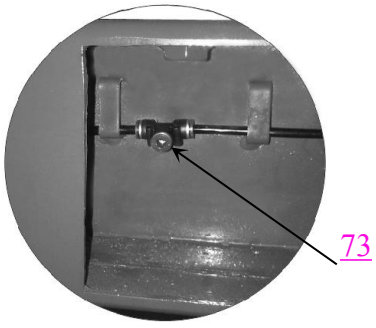
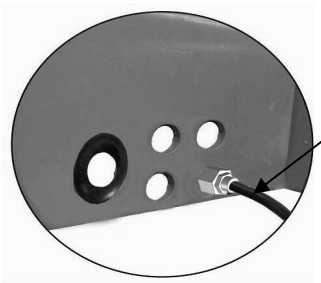


Fig.30



K enlarged view
Fig.31



L enlarged view
Fig.32

5. Install oil-water separator and manual control air valve. (see **Fig.33**)

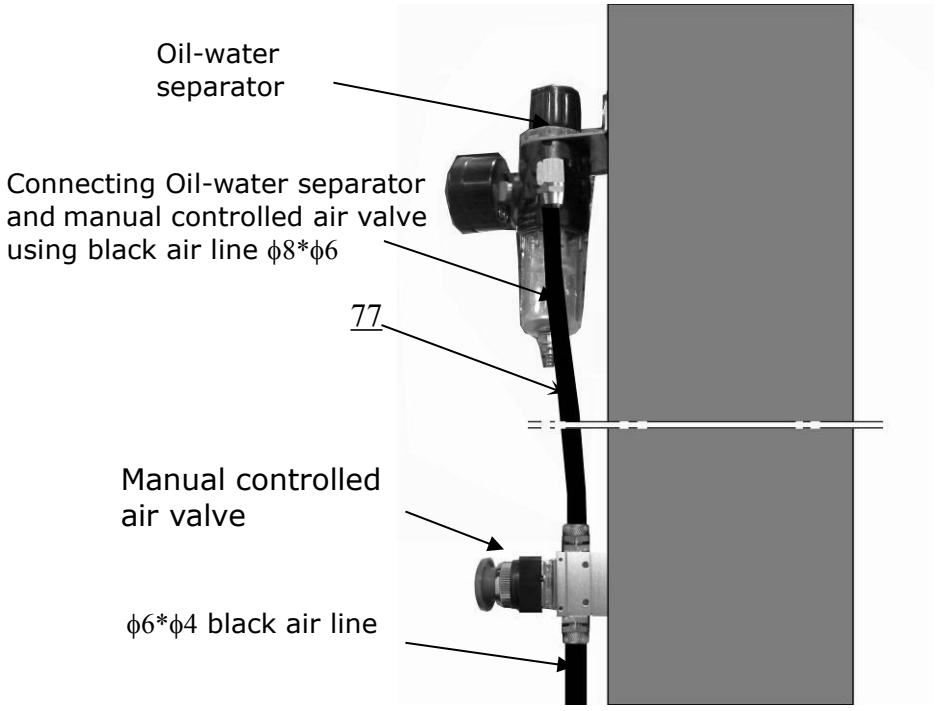


Fig. 33

6. Connecting air inlet (Air supply pressure 5-8kg/cm^2), adjusting the air pressure of Oil-water separator to 0.8MPa **(See Fig. 34)**.

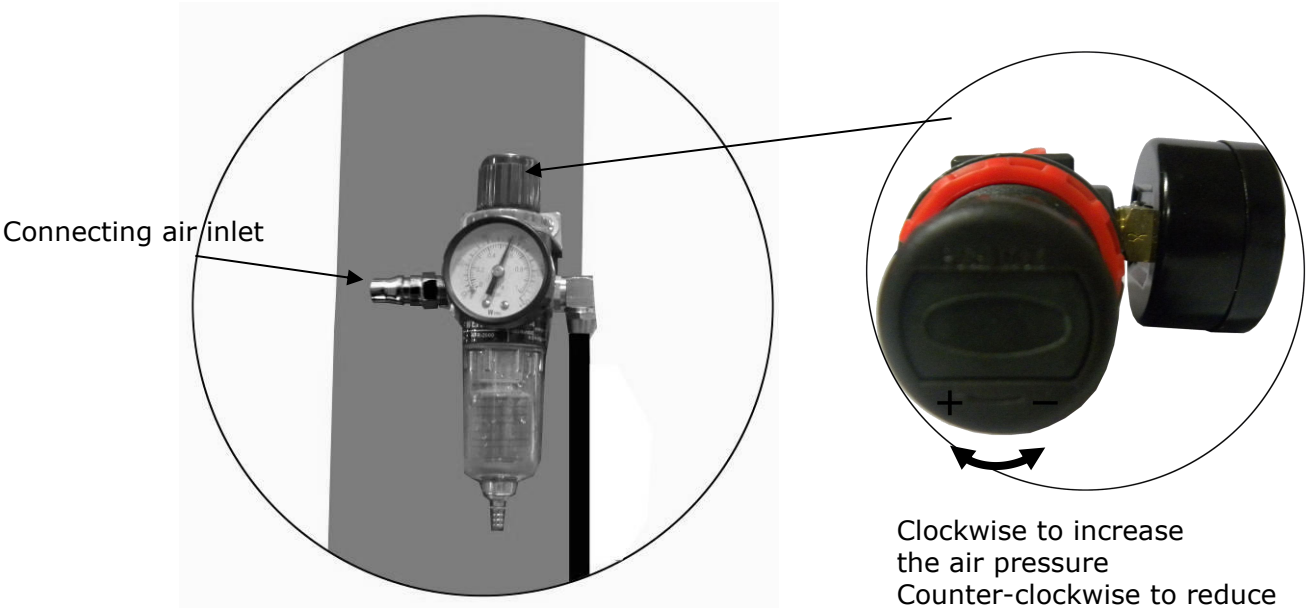


Fig. 34

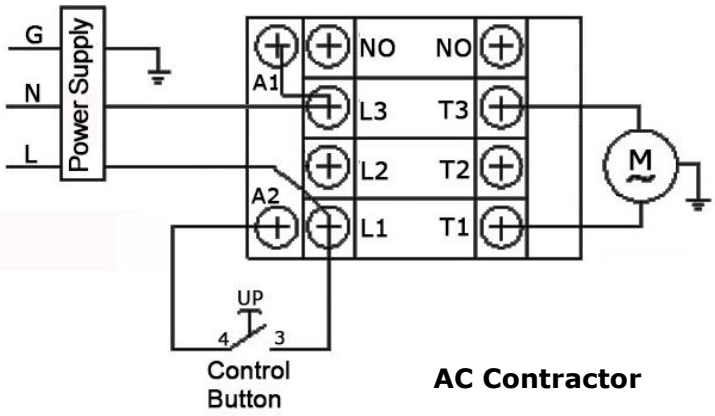
N. Install Electrical System

Connect the power source on the data plate of Motor.

Note: For the safety of operators, the power wiring must contact the floor well.

Single phase motor (See Fig. 35)

1. Connecting the two power supply wires (active wire **L** and neutral wire **N**) to terminals of AC contactor marked L1, L3 respectively.
2. If the power supply wire both active wire L, then connect two wires to terminals of AC contractor marked L1, L3.
3. Earth wire(yellow and green wire) is connected with the earth wire terminal of the motor.



AC Contractor

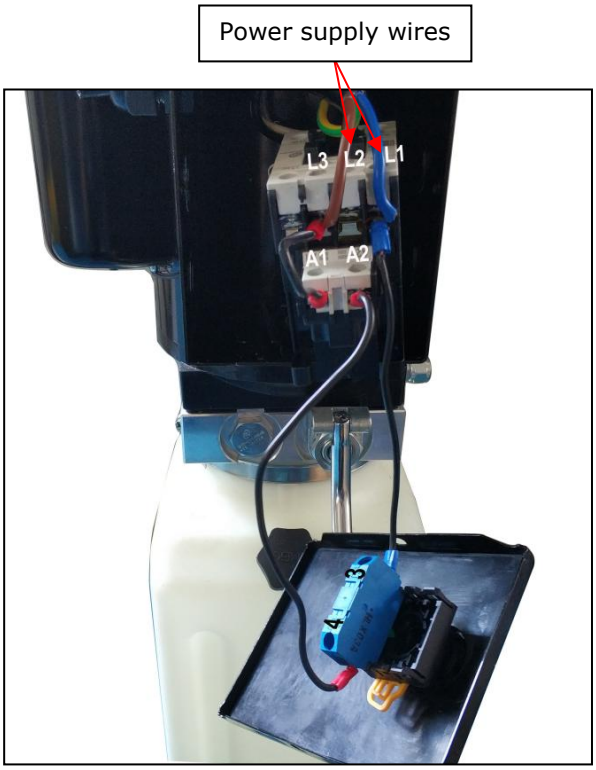


Fig. 35

O. Install Spring and Safety Cover of Cross Beam (See Fig. 36).

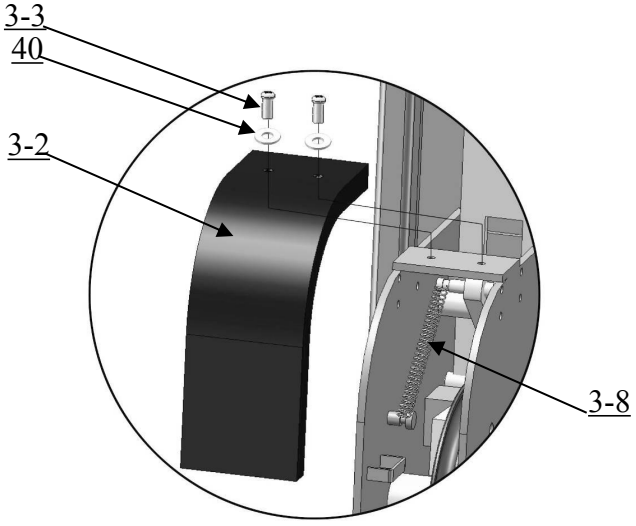
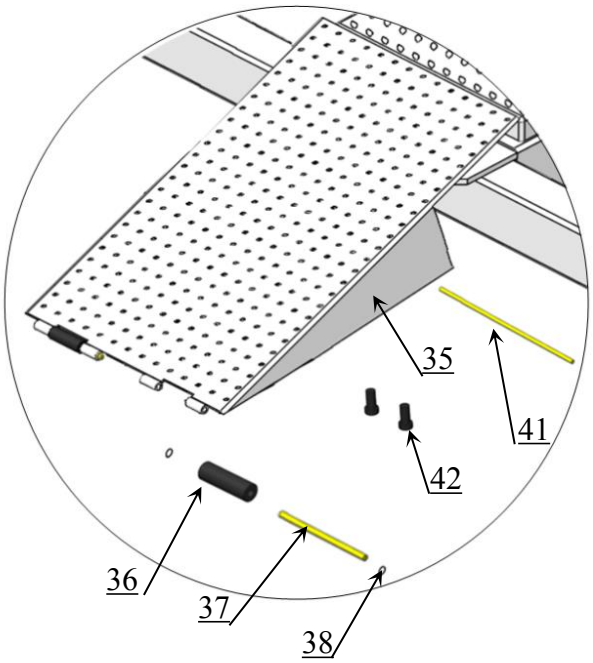


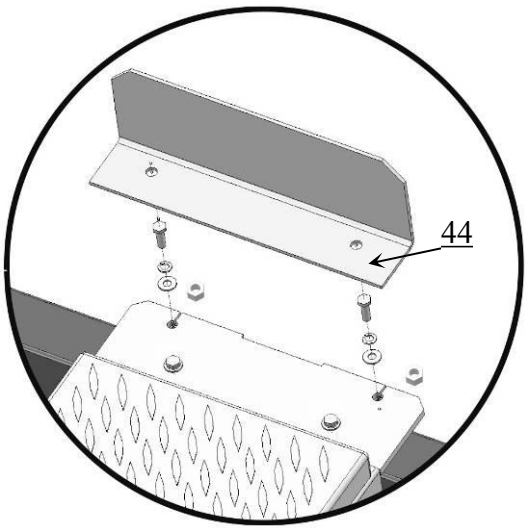
Fig. 36

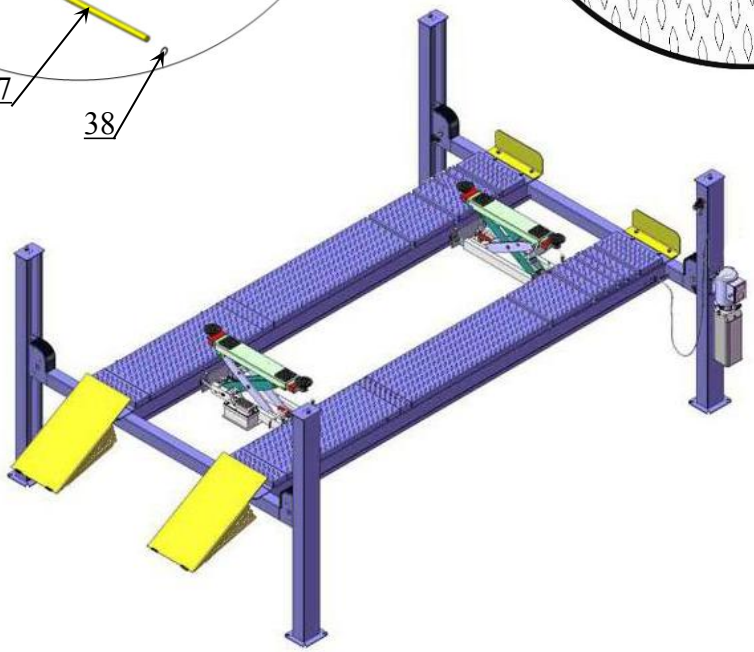
P. Install Drive-in ramp, Tire stop plate, Platform locking plates, Steel ball set,Limit rod (See Fig. 37).

Install Drive-in ramp

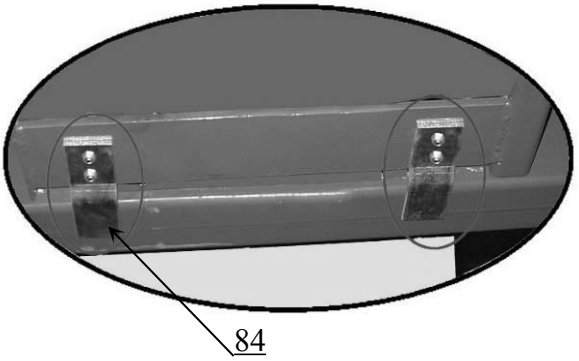


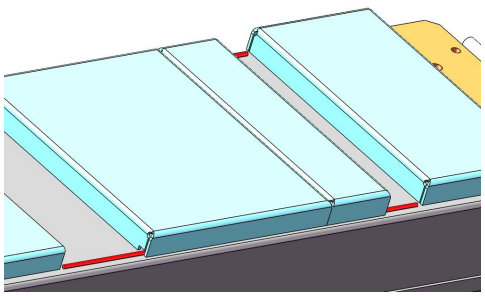
Install Tire stop plate





The lock plates are used to prevent the turning & slipping of offside platform, Using Hex bolt M8×20 for the connection.





Install turnplate adjusting block

Fig.37

IV. EXPLODED VIEW

Model PRO-14, PRO-14E

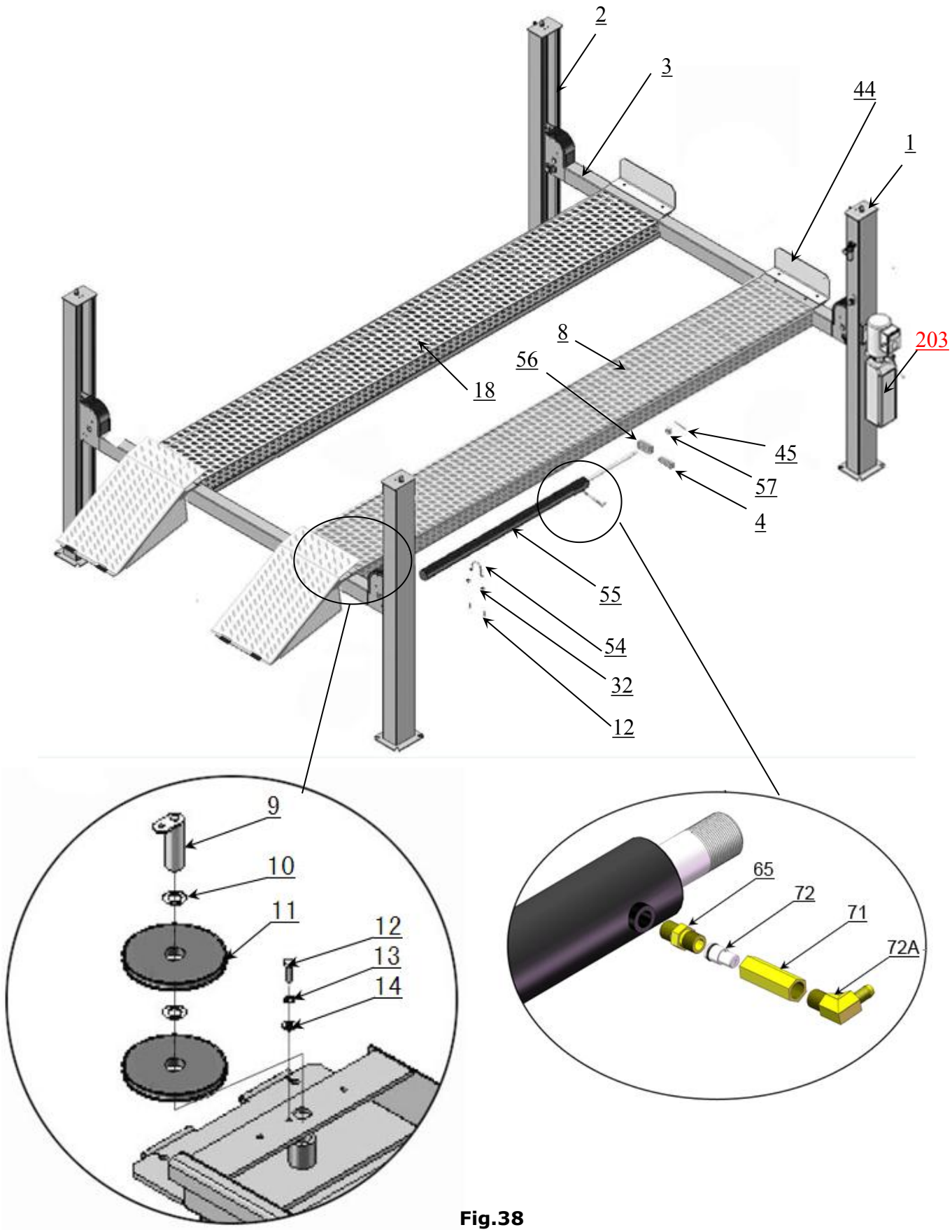
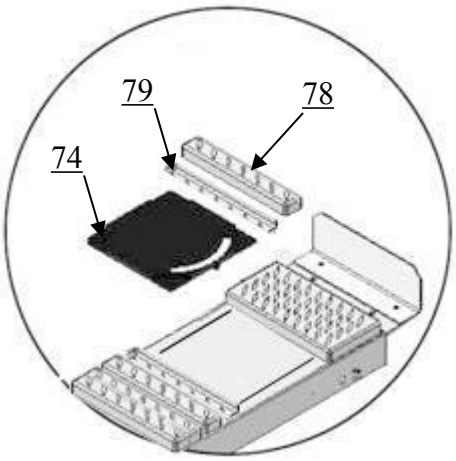
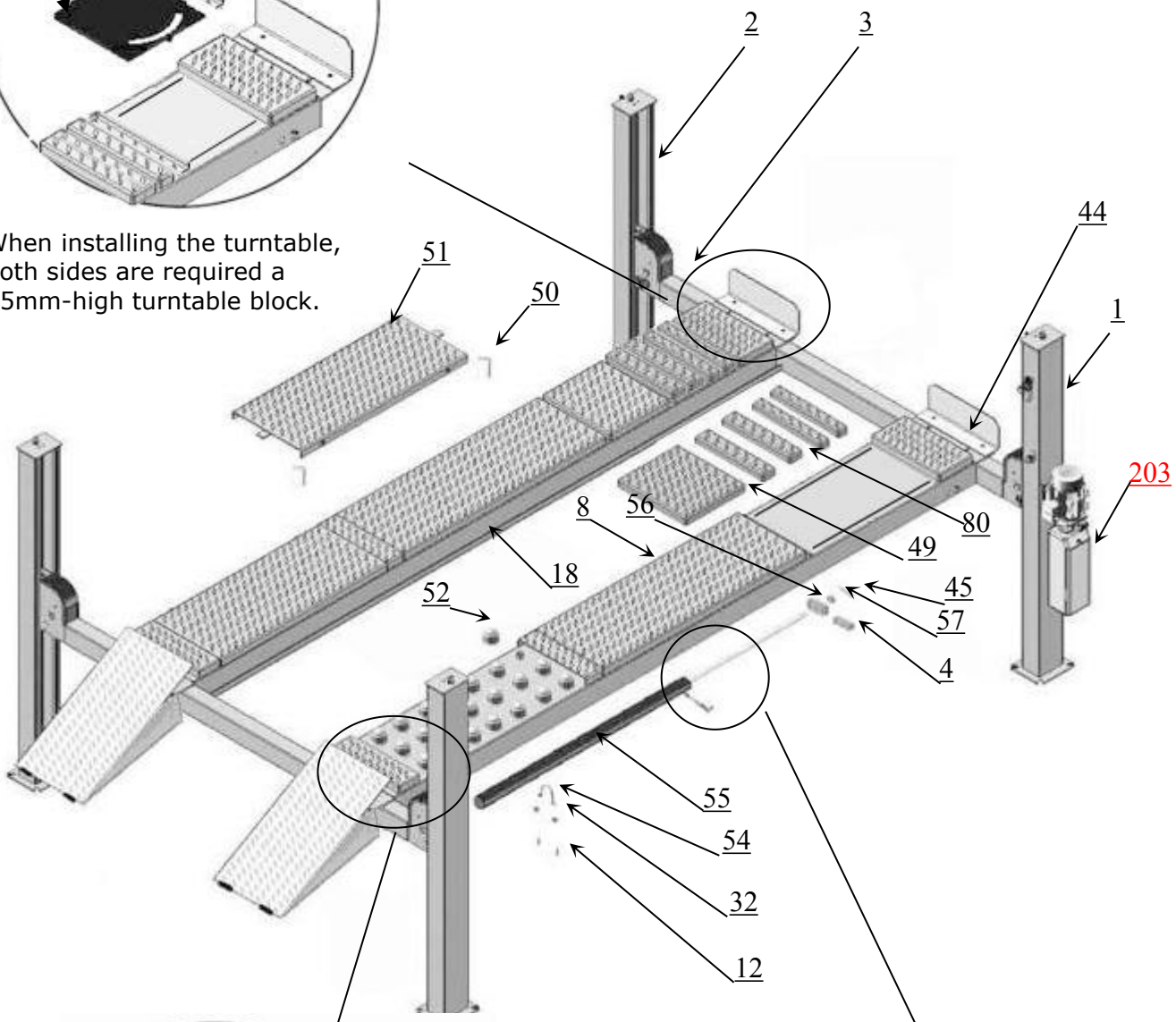
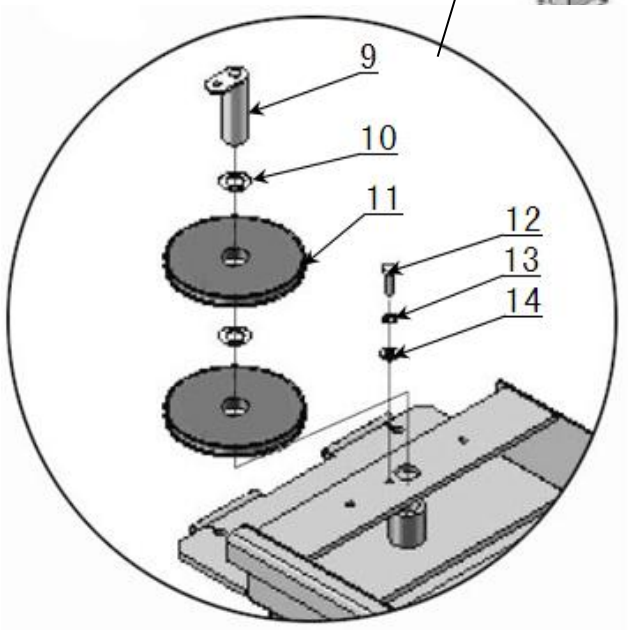


Fig.38



When installing the turntable, both sides are required a 35mm-high turntable block.





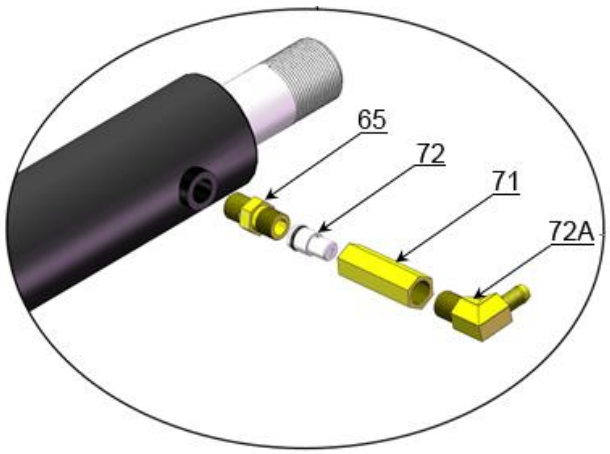


Fig.39

Parts list for PRO-14, PRO-14A, PRO-14E, PRO-14AE

Item	Part#	Description	PRO-14	PRO-14A	PRO-14E	PRO-14AE
1	11460021	Power-side Column	1	1	1	1
2	11460020	Offside Column	3	3	3	3
3	10460063	Cross Beam assy.	2	2	2	2
4	10476016	Limit slider	1	1	1	1
5	10209059	Anchor Bolt 3/4*5-1/2	16	16	16	16
6	11460074	Safety Ladder	4	4	4	4
7	10476014	Hex Nut M22	8	8	8	8
8	11460054-01	Power-side Platform	1	0	0	0
	11460024-01		0	1	0	0
	11460024-01		0	0	1	0
	11460055-01		0	0	0	1
9	11476010	Pulley Shaft Weldment	2	2	2	2
10	10476029	Washer for pulley φ100*φ51*5(HK016)	4	4	4	4
11	11476636	Pulley	6	6	6	6
11A	10476025	Bronze Bush for Pulley φ60*φ50*20	10	10	10	10
12	10209043	Hex Bolt M8*20	12	12	12	12
13	10209034	Lock Washer φ8	2	2	2	2
14	10420144	Washer φ8*φ25*3	2	2	2	2
15	10420030	Hex Bolt M16*40	12	12	12	12
16	10201114	Lock Washer φ20	8	8	8	8
17	10209128	Washer φ20	8	8	8	8
18	11460055-01	Offside Platform	1	0	0	0
	11460026-01		0	1	0	0
	11460026-01		0	0	1	0
	11460055-01		0	0	0	1
19	10476015	Hex Bolt M10*150	4	4	4	4
20	10420145	Oil-water Separator AFR-2000	1	1	1	1
21	10420146	Straight Fitting for Air Line	1	1	1	1
22	10209009	Cap Head Bolt M6*8	8	8	8	8
23	10420076	90° Fitting for Air Line 6*8	1	1	1	1
24	10420159	Straight Fitting for Air Line 6*8	1	1	1	1
25	11420160	Fixing plate of Manual Control Valve	1	1	1	1
26	10420161	Self locking nut	2	2	2	2
27	10420162	Manual Control Air Valve	1	1	1	1
28	10420163	Straight Fitting for Air Line 6*4	1	1	1	1
29	10420148	Washer φ4	4	4	4	4
30	10420164	Cap Head Bolt M4*30	2	2	2	2
31	071102	Manual power unit	1	1	1	1
32	10209005	Self locking nut M8	14	14	14	14
33	10209004	Rubber Ring φ8*20*3	4	4	4	4
34	10209003	Hex Bolt M8*25	4	4	4	4
35	11460028	Drive-in ramp	2	0	2	0
	11470003A		0	2	0	2
36	11610667	Roller for Drive-thru Ramp	4	4	4	4

Item	Part#	Description	PRO-14	PRO-14A	PRO-14E	PRO-14AE
37	11620043	Roller pin	4	4	4	4
38	10209010	Snap ring φ10	8	8	8	8
39	10420156	Protecting Rubber Ring φ24	1	1	1	1
40	10420045	Washer φ6	20	20	20	20
41	10420004	Pin for Drive-in Ramp	2	2	2	2
42	10420005	Fixing Bolt M5*8	4	4	4	4
43	10460501	Parts box	1	0	1	0
	10470501		0	1	0	1
44	11420031-1	Tire Stop Plate	2	2	2	2
45	10201005	Split pin φ4*50	1	1	1	1
46	10201090	Shim（1mm）	20	20	20	20
	10620065	Shim（2mm）	20	20	20	20
47	10209056	Self locking nut M10	4	4	4	4
48	11420217	Cable Limit Pin	4	4	4	4
49	11430004-01	Turn plate cover	0	2	0	2
50	11520037	Split pin	0	4	0	4
51	11450003	Slip Plate	0	2	0	2
52	10420157	Steel Ball Set	0	60	0	60
54	11460029	Fixing Ring For Oil Cylinder	1	1	1	1
55	10460030	Cylinder	1	1	1	1
56	11460078	Cable connecting plate	1	1	1	1
57	10420014	Hex Nut M27	1	1	1	1
58	10420016B	Protective hose φ40*2*1500mm	1	1	1	1
59	10420158	Turnplate	0	2	0	2
60	10460066	No.① Cable	1	1	0	0
	10460087		0	0	1	1
61	10460069	No.② Cable	1	1	0	0
	10460090		0	0	1	1
62	10460067	No.③ Cable	1	1	0	0
	10460088		0	0	1	1
63	10460068	No.④ Cable	1	1	0	0
	10460089		0	0	1	1
64	10420166	90° Fitting 6*4	1	1	1	1
65	11420243	Straight Fitting	1	1	1	1
66	10460060	Oil Hose(straight+90°)	1	1	0	0
	10460091		0	0	1	1
67	10420120	Extended Straight Fitting (with Nut)	1	1	1	1
68	10460038	Oil Hose(double straight)	1	1	1	1
69	10209060	90° Fitting For Hydraulic Power Unit	1	1	1	1
70	10420095	Straight Fitting screw thread	1	1	1	1
71	10420245	Fitting	1	1	1	1
72	10420247	Compensation Valve	1	1	1	1
72A	10201020	90° Fitting	1	1	1	1
73	10420124	T-Fitting For Air Line	2	2	2	2
74	10420242	T-Fitting	1	1	1	1
75	10420241	Straight Fitting	1	1	1	1
76	10476007	Oil Return Hose φ6*φ4*6680mm black	1	1	0	0
	10460092	Oil Return Hose φ6*φ4*7275mm black	0	0	1	1

Item	Part#	Description	PRO-14	PRO-14A	PRO-14E	PRO-14AE
76A	10460013	Black Air Line φ6*φ4	1	1	0	0
	10460094	Black Air Line φ6*φ4*8900mm	0	0	1	1
77	10420167A	Black Air Line φ8*φ6*460mm	1	1	1	1
78	11480033-01	Turnplate adjusting block φ8*φ6*460mm	0	4	0	4
79	11480045-01	Turnplate adjusting block 483*35*35	0	4	0	4
80	11440082-01	Turnplate adjusting block 483*141*50	0	4	0	4
81	11476635	Pulley	4	4	4	4
82	10476024	Washer for Pulley 2.5*90*90	8	8	8	8
83	10476014	Hex nut M22	8	8	8	8
84	11420007	Fixing plate against rollover	4	4	4	4

4.1 CROSS BEAM EXPLODED VIEW (10460063)

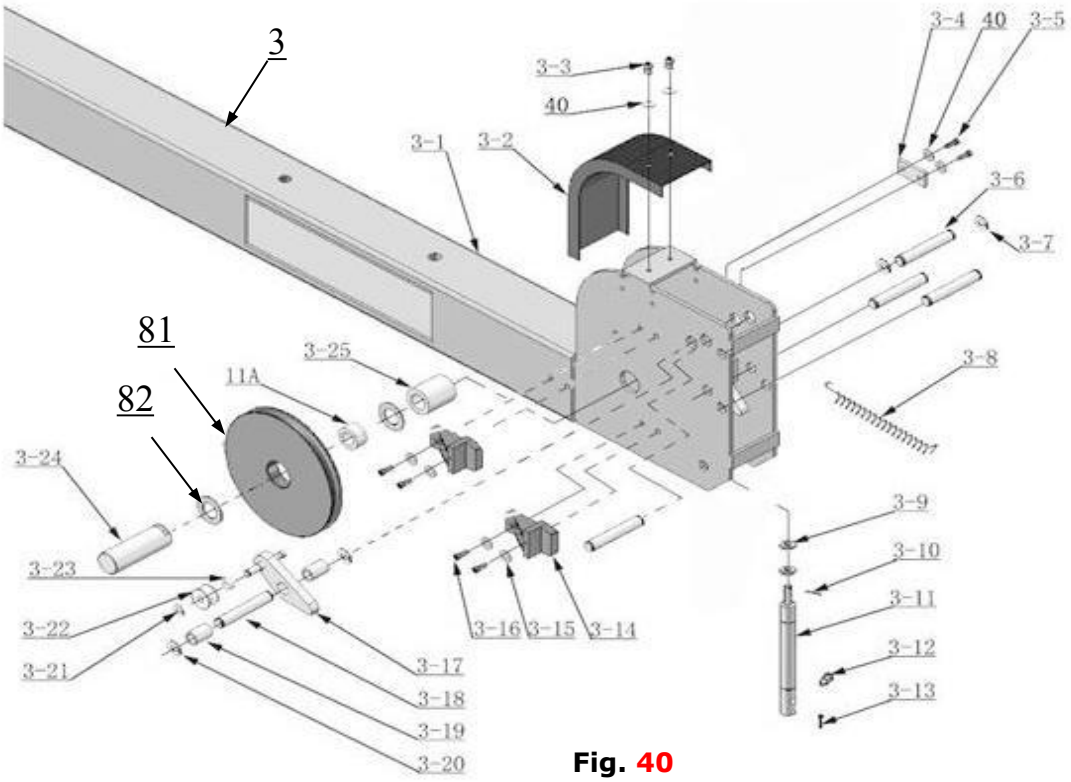


Fig. 40

Parts list For Cross Beam				
Item	**Part#**	**Description**	**Qty**	**Note**
3-1	11460064	Front Cross Beam	2	
3-2	10460043	Pulley Safety Cover	4	
3-3	10209009	Cap Head Bolt M6*8	8	
3-4	11420044	Limit Plate	4	
3-5	10420138	Socket Bolt M6*16	8	
3-6	11420038	Pin φ16	12	
3-7	10420037	Snap Ring φ16	24	
3-8	10420033	Spring	4	
3-9	10209021	Hex Nut M10	8	
3-10	10420049	Split Pin φ2*16	4	

Item	Part#	Description	Qty	Note
3-11	10420048	Air Cylinder	4	
3-12	10420047	Fitting for Air Cylinder	4	
3-13	10420046	Split Pin φ4*30	8	
3-14	10420042	Plastic Slider	16	
3-15	10209033	Washer φ8	40	
3-16	10420043	Socket Bolt M8*20	32	
3-17	10420175	Slack-cable safety lock (left & right)	Each 2	
3-18	10420171	Pin φ19	8	
3-19	10420172	Pin Bush For Slack-cable safety lock	8	
3-20	10206019	Snap Ring φ19	16	
3-21	10209010	Snap Ring φ10	4	
3-22	10420035	Tension Pulley	4	
3-23	11420174	Spacer	4	
3-24	11476026	Pulley Pin	4	
3-25	11460076	Pulley shaft sleeve	4	

4.2 CYLINDERS EXPLODED VIEW (10460030)

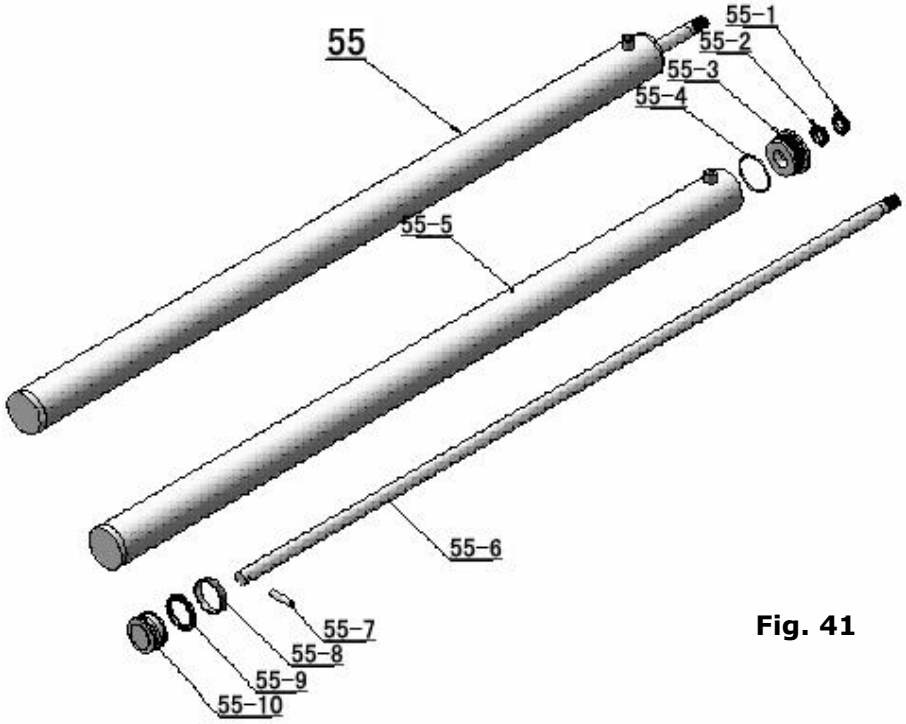


Fig. 41

Parts list For Cylinder				
Item	**Part#**	**Description**	**Qty**	**Note**
55-1	10420059	Dust Ring	1	
55-2	10420060	Y- Ring IDI	1	
55-3	11460046	Head Cap	1	
55-4	10460047	O- Ring	1	
55-5	11460048	Bore Weldment	1	
55-6	11420064	Piston Rod	1	
55-7	11460050	Pin	1	
55-8	10460051	Support Ring	1	
55-9	10460052	Y- Ring OSI	1	
55-10	11460053	Piston	1	

4.3 POWER UNIT EXPLODED VIEW(071102)

220V/60Hz Single Phase

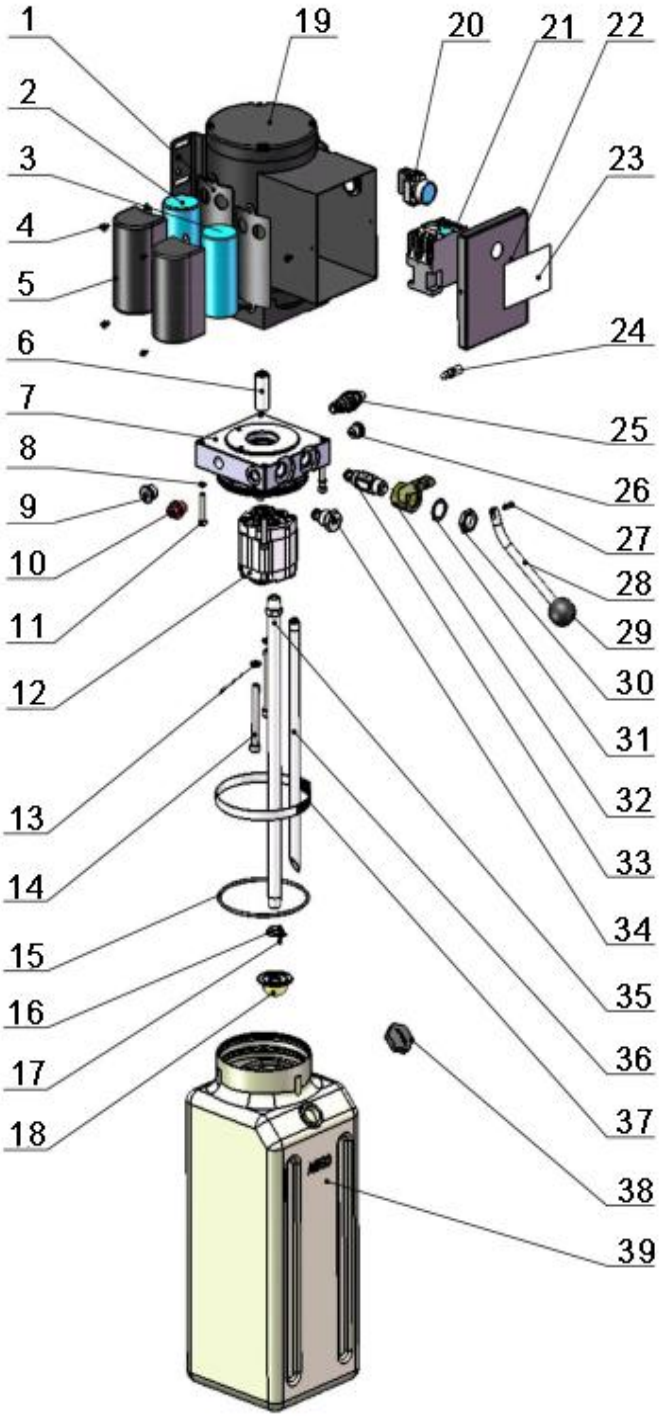


Fig.42

Parts list for 220V/60Hz, Single Phase

Item	Part#	Description	Qty
1	81400180	Rubber Pad	2
2	81400250	Starting capacitor	1
3	81400200	Running capacitor	1
4	10420148	Cap Head Bolt with washer	4
5	81400066	Cover of Motor Terminal Box	2
6	81400363	Motor Connecting Shaft	1
7	80101013	Manifold block	1
8	10209149	Washer	4
9	81400276	Iron plug	1
10	81400259	Red rubber plug	1
11	85090142	Socket bolt	4
12	81400280	Gear pump	1
13	10209034	Washer	2
14	81400295	Socket bolt	2
15	81400365	O ring	1
16	10209152	Ties	1
17	85090167	Magnet	1
18	81400290	Filter net	1
19	81400413	Steel Motor	1
20	10420070	Push button	1
21	41030055	AC connector	1
22	81400287	Motor terminal box cover	1
23	71111216	AMGO power unit label	1
24	81400560	Throttle valve	1
25	81400266	Relief valve	1
26	81400284	Inner hex iron plug	1
27	10720118	Elastic pin	1
28	81400451	Release valve handle	1
29	10209020	Plastic ball for release handle	1
30	81400421	Release valve nut	1
31	81400422	Shim	1
32	81400449	Valve Seat(Low)	1
33	81400567	Release Valve	1
34	81400566	Check Valve	1
35	81400366	Oil suction pipe	1
36	81400289	Oil return pipe	1
37	81400364	Clamp(stainless steel)	1
38	81400263	Oil tank cap	1
39	81400319	Oil tank	1

Illustration of hydraulic valve for power unit

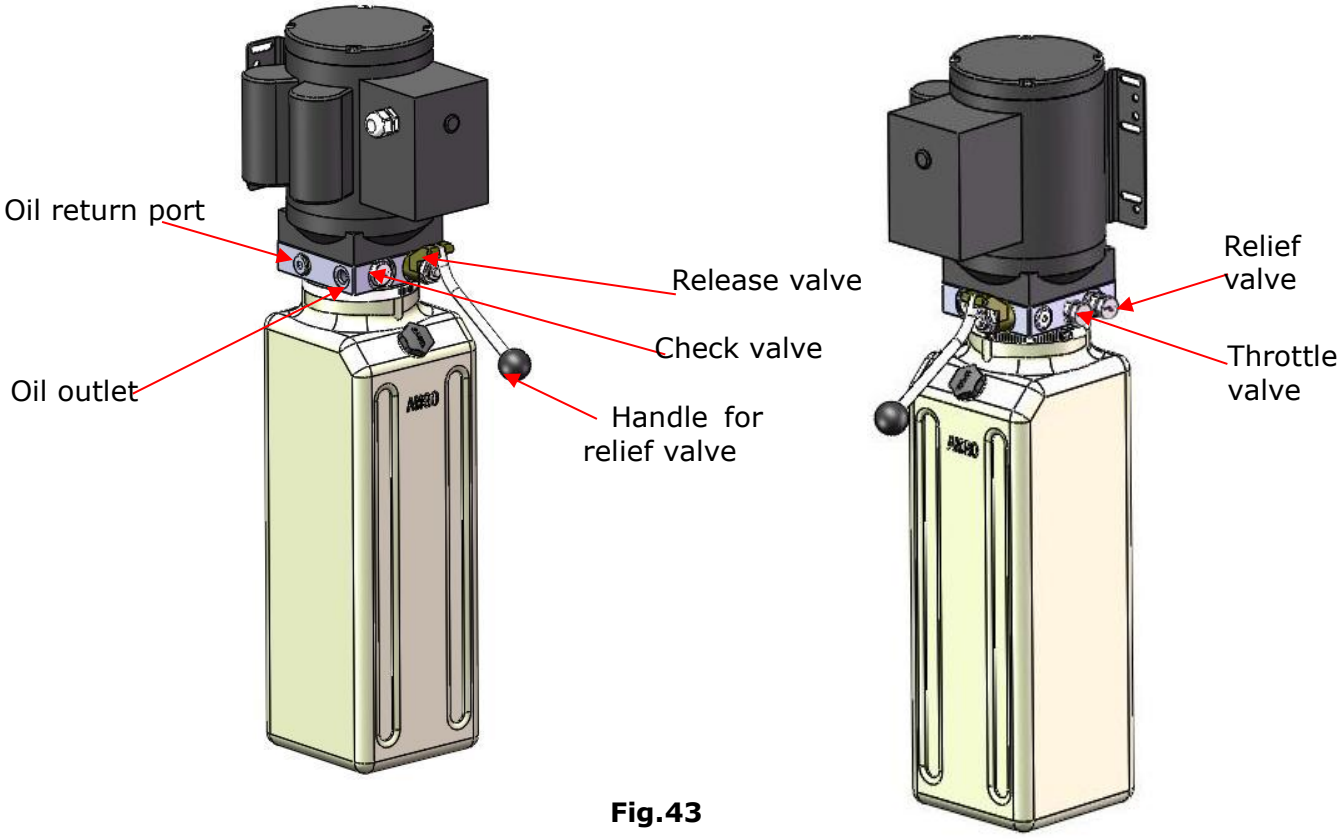
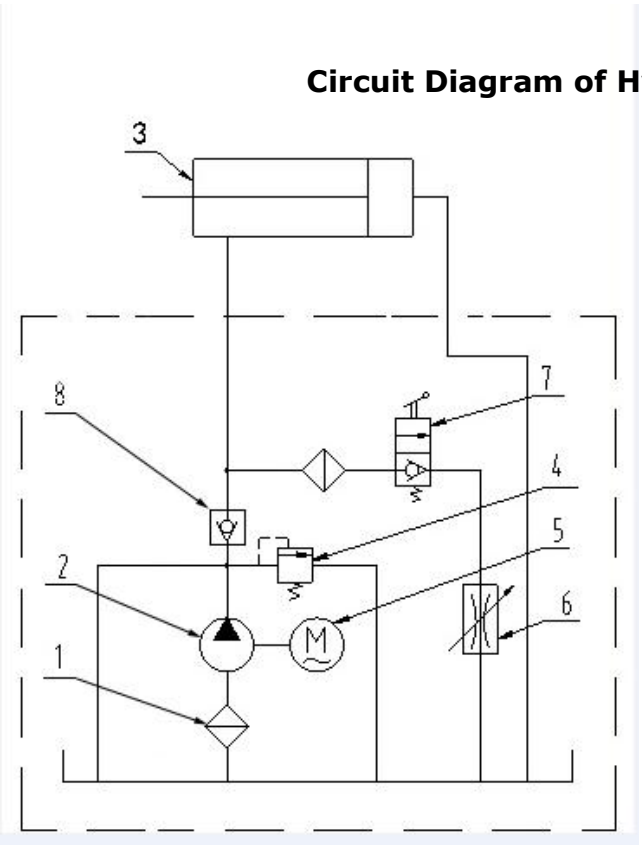


Fig.43

V. TEST RUN

1. Fill the reservoir with approximately 14L Hydraulic Oil (**Note**: In consideration of Power Unit's durability，please use **Hydraulic Oil 46#**).
2. Press the push button , the Cables will be strained. Check whether the Cables match the Pulley. Make sure the Cables are not across.
3. Press the Handle of release valve to lock the Cross-beam to the safety ladders, and then adjust the platforms to be level by adjusting the nuts of Safety Ladders.
4. Adjust the cable fitting Hex nuts to make platforms and four safety locks work synchronously. You need to run the lift up and down for several times, meanwhile do the synchronous adjustment till the four Safety Devices can lock and release at the same time.
5. Adjust the clearance between the post and the plastic slider of Cross-beam to about 2mm, and then tighten the fixing nut of slider.
6. After finishing the above adjustment, test running the lift with load. Run the lift with Platforms in low position first, make sure the Platforms can rise and lower synchronously and the Safety Device can lock and release synchronously. And then test run the lift to the top completely. If there are anything improper, repeat the above adjustment.

Circuit Diagram of Hydraulic System



NOTE

1. Filter
2. Gear pump
3. Cylinder For Four-post lift
4. Relief Valve
5. Motor
6. Throttle Valve
7. Release Valve
8. Check Valve

Fig. 44

VI. OPERATION INSTRUCTIONS

To lift vehicle

Keep clean of environment near the lift;

1. Drive vehicle to the Platform and put on the brake;
2. Turn on the power and press the push button, raise the lift to the working position;
   Note: make sure the vehicle is steady when the lift is raised.
3. Press the Handle of release valve to lock the lift in the safety position. Make sure the Safety device is locked at the same height.

To lower vehicle

1. Be sure the clearance of around and under the lift, only leaving operator in lift area;
2. Press the push button , the lift will be raised for 3-5 seconds, and then press the button of Manual-controlled air valve by hand to make sure the safety device released, press the handle of release valve by the other hand then the lift starts being lowered automatically;
3. Drive away the vehicle when the lift is lowered to the lowest position.
4. Turn off the power.

VII. MAINTENANCE SCHEDULE

Monthly:

1. Re-torque the anchor bolts to 150 Nm;
2. Lubricate cable with lubricant;
3. Check all cable connection, bolts and pins to insure proper mounting;
4. Make a visual inspection of all hydraulic hoses/lines for possible wear or leakage;
5. Lubricate all Rollers, Safety devices with 90wt. gear oil or equivalent.

Note: All anchor bolts should take full torque. If any of the bolts does not function for any reason, DO NOT use the lift until the bolt has been replaced.

Every six months:

1. Make a visual inspection of all moving parts for possible wear, interference or damage.
2. Check and adjust as necessary, equalizer tension to insure level lifting.
3. Check the vertical of columns.

Oil cylinder maintenance:

In order to extend the service life of the oil cylinder, please operate according to the following requirements.

1. Recommend to use N46 anti-wear hydraulic oil.
2. The hydraulic oil of the lifts should be replaced regularly during using. Replace the hydraulic oil 3 months after the first installation, Replace the hydraulic oil once a year afterwards.
3. Make at least one full trip raising and lowering per day. For exhausting the air from the system, which could effectively avoid the corrosion of the cylinder and damage to the seals caused by presence of air or water in the system.
4. Protect the outer surface of the oil cylinder’s piston rod from bumping and scratching, and timely clean up the debris on the oil cylinder dust-ring and the piston rod.

VIII. TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
Motor does not run	1. Start Button does not work 2.Wiring connections are not in good condition 3. Motor burned out 4. AC contactor burned out 5. Height limit switch is damaged	1.Replace start button 2.Repair all wiring connections 3.Repair or replace motor 4.Replace AC contactor 5.Replace
Motor runs but the lift is not raised	1.Motor runs in reverse rotation 2. Release valve in damage 3. Gear pump in damage 4.Relief valve or check valve in damage 5.Low oil level	1.Reverse two power wire 2.Repair or replace 3.Repair or replace 4.Repair or replace 5.Fill tank
Lift does not stay up	1. Release valve out of work 2 Relief valve or check valve leakage. 3.Cylinder or fittings leaks	Repair or replace
Lift raises too slow	1.Oil line is jammed 2.Motor running on low voltage 3. Oil mixed with Air 4.Pump leaks 5.Overload lifting	1.Clean the oil line 2.Check electrical system 3. Fill tank 4.Replace Pump 5.Check load
Lift cannot lower	1. Safety device are in activated 2. Release valve damaged 3. Air Cylinder damaged 4. Air leaks	1. Release the safeties 2. Replace or repair 3.Replace the cylinder 4. Clean the air line

IX. LIFT DISPOSAL:

When the car lift cannot meet the requirements for normal use and needs to be disposed, it should follow local laws and regulations.

AMGO® Hydraulics

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Manual Part No.: 72246103
Revision Date: 2022/12